
Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

WT Docket No. 03-264

In the Matter of

**Biennial Regulatory Review
Amendment of
Parts 1, 22, 24, 27 and 90 to Streamline and
Harmonize Various Rules Affecting Wireless
Radio Services**

COMMENTS OF CINGULAR WIRELESS LLC

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COMMENTS OF CINGULAR WIRELESS LLC

Cingular Wireless LLC (Cingular) hereby comments on the issues raised in the Notice of Proposed Rulemaking (Notice) in the captioned proceeding. The Notice was adopted on December 29, 2003, and was released on January 7, 2004 (FCC 03-334). A summary of the Notice was published in the Federal Register on February 23, 2004. Cingular supports the Commission's efforts to streamline and harmonize its rules and to eliminate unnecessary regulation.

I. Effective Radiated Power/Equivalent Isotropically Radiated Power.

The Commission's rules currently prescribe power limits in terms of Effective Radiated Power (ERP) for Cellular Radiotelephone Service and in terms of Equivalent Isotropically Radiated Power (EIRP) for broadband Personal Communications Service (PCS).¹ In its comments in the 2000 biennial review proceeding, the Telecommunications Industry Association (TIA) recommended that the Commission specify all power limits in Parts 22 and 24 of the rules in terms of EIRP.² In the *2000 Biennial Review Report* the Commission recommended initiating a rulemaking to

¹ See 47 C.F.R. §22.913; 47 C.F.R §24.232.

² Comments of the Wireless Communications Division of the Telecommunications Industry Association filed in CC Docket No. 00-175 on October 10, 2000.

consider using EIRP exclusively in the rules.³ In the Notice, however, the Commission tentatively concludes that the cost of implementation and potential for greater confusion outweigh any benefit that would occur from harmonizing the rules.⁴

Cingular agrees with TIA that the rules should state power limits consistently in terms of EIRP. Most calculations of field strength and power densities involve the use of EIRP. The Commission should modify its databases to reflect EIRP units. One way to mitigate the cost and confusion caused by this conversion would be to include initially power limits in terms of both EIRP and ERP, e.g., EIRP with (ERP) in parentheses. This would remove any confusion in the rules and make them more easily understood. Over time, the Commission could drop the reference to ERP entirely. The Commission should also amend the Terms and Definitions in Part 2.1 of the rules by adding a cross reference to the other unit of measure with the appropriate conversion factor, for example:

$$\text{EIRP (Watts)} = \text{ERP (Watts)} \times 1.64$$

$$\text{EIRP (dBW)} = \text{ERP (dBW)} + 2.15 \text{ dB.}$$

II. Part 22 Transmitter Identification.

Section 22.303 of the Commission's rules currently requires that cellular carriers post the station call sign on or near every transmitting facility, other than mobile transmitters, of the station. Wireless services regulated under other parts of the Commission's rules do not require posting of call sign information on each transmitter. The Notice recommends harmonizing the rules by eliminating the last sentence of Section 22.303, thereby eliminating the transmitter-specific posting requirement for cellular and

³ 2000 Biennial Review Report, 16 FCC Rcd 1207, 1231 ¶ 69

⁴ Notice ¶ 11.

other Part 22 licensees.⁵

Cingular concurs with the Commission's recommendation. Not having posted call sign information has not proved problematic for PCS and other services governed by other parts of the rules. The proposed rule change would harmonize the cellular and PCS rules and eliminate an unnecessary obligation on licensees.

III. Part 24 Power and Antenna Height Limits.

Section 24.232(a) of the Commission's rules contains power limitations for broadband PCS. Base stations are limited to 1640 watts peak EIRP and base station transmitters are limited to 100 watts peak output power. The Commission adopted these limits to reduce the likelihood that PCS operators would deploy base stations that could transmit strong signals over distances well beyond a mobile unit's capacity to respond. In 1994, the Commission clarified that the power limits "apply to individual components and not to the sum of all components at the entire base station."⁶

In comments filed in the 2002 biennial review proceeding, Powerwave noted that the 1994 clarification was never incorporated into the Commission's rules.⁷ Powerwave notes that with the dramatic increase in PCS subscriber growth, carriers are utilizing multi-carrier power amplifiers (MCPAs) to increase the number of radio frequency (RF) carriers utilized to provide additional voice channels from a given transmitter. Powerwave suggests that the power limitations in Section 24.232(a) are no longer needed, because it is now recognized that it is in the PCS provider's best interest to

⁵ Notice ¶ 12.

⁶ Notice ¶ 13, *citing* Amendment of the Commission's Rules to establish New Personal Communications Services, GEN Docket No. 90-314, *Third Memorandum Opinion and Order*, 9 FCC Rcd 6908, 6918, ¶ 62 (1994).

⁷ See Comments of Powerwave, Inc. filed in WT Docket No. 02-310 on October 18, 2002.

“optimally balance the link between its base stations and mobile units.” Powerwave requests that at a minimum, the Commission amend Section 24.232(a) to clarify that the power limit of 100 watts applies on a per carrier basis in the case of MCPAs.⁸

In the Notice, the Commission asks whether the transmitter power output restriction should be eliminated altogether or whether the Commission should relax the power limitation by amending the rule to clarify that the output power limit of 100 watts applies on a per carrier basis in the case of MCPAs.⁹

The Commission should amend Section 24.232(a) to clarify that the 100 watt output power limit applies on a “per RF carrier” basis when an MCPA is employed. The basic building block, from an RF point of view, is the individual RF carrier.¹⁰ These carriers can be combined through an intermediate RF power amplifier (transmitter). Transmitters can be further combined using a MCPA into a single output signal (composed of multiple RF carriers) for the base station subsystem.

Because the basic building block for the transmission of RF energy is the RF carrier, each point in the transmission path can be referenced on a “per carrier” basis, including the radiated power (1640 watts peak EIRP). From the standpoint of the equipment operator, there is instrumentation available that will display the individual RF carriers and provide a power level for each carrier both in a visual display (bar graph) and in a digital readout. Monitoring output power on a “per RF carrier” basis is relatively straightforward and usually is not difficult or expensive for the PCS licensee. On the

⁸ Notice ¶¶ 14-15.

⁹ Notice ¶ 17.

¹⁰ An RF carrier is defined as a module that has as its input the modulated information from one or more individual voice or data inputs which is impressed into a modulated waveform capable of being transmitted as output over a wireless link.

contrary, substituting power spectral density for a “per RF carrier” output power limit would be much more confusing for the average field technician and this should not be considered as a change to the rules.

From the standpoint of equipment compliance, if the Commission retains the 100 watt maximum output power limit, then it should be stated on a “per RF carrier” that the manufacturers need to certify compliance.

IV. Conclusion.

Cingular commends the Commission for looking for ways to streamline and simplify its rules while maintaining appropriate protection for consumers and reducing unnecessary regulation of carriers. The modifications to the Commission’s rules suggested above will further that goal.

Respectfully submitted,

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April 23, 2004

CERTIFICATE OF SERVICE

I, Lydia Byrd, an employee in the Legal Department of Cingular Wireless LLC, hereby certify that on this 23rd day of April , 2004, courtesy copies of the foregoing Comments of Cingular Wireless were sent via first class mail, postage prepaid to the following:

Marlene H. Dortch, Secretary
Federal Communications Commission
Office of the Secretary
9300 East Hampton Drive
Capitol Heights, MD 20743

John Muleta, Chief
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In addition, the document was filed electronically in the Commission's Electronic Comment Filing System on the FCC website.

s/ Lydia Byrd
Lydia Byrd